CENTERS OF EXCELLENCE - 2000/2001 FINANCIAL SUMMARY

CENTERS FUNDED IN FISCAL 2000/2001	State Funding 2000/2001	Cumulative State Funding	Fed. Match 2000/2001	Private Match 2000/2001	Total Match 2000/2001	Cumulative Total Match
Acoustic Cooling Technology - U/U	$100,000	$100,000	$675,000	$10,000	$685,000	$685,000
Advanced Joining of Materials - BYU	$120,000	$230,000	$180,000	$116,000	$296,000	$694,000
Advanced Structural Composites - BYU	$110,000	$330,000	$84,029	$84,000	$168,029	$648,342
Biomedical Optics - U/U	$130,000	$250,000	$579,334	$0	$579,334	$1,108,310
Bioremediation - WSU	$50,000	$50,000	$18,000	$135,121	$153,121	$153,121
Cell Signaling - U/U	$180,000	$395,000	$6,000,000	$578,000	$6,578,000	$12,767,807
Compliant Mechanisms -BYU	$120,000	$230,000	$215,103	$172,250	$387,353	$760,773
Dairy Technology Commercialization - USU	$110,000	$345,000	$0	$691,113	$691,113	$1,520,576
Electronic Medical Education - U/U	$120,000	$240,000	$100,000	$140,000	$240,000	$480,000
Intelligent Computer Tools - BYU	$110,000	$305,000	$0	$831,135	$831,135	$3,370,537
Rapid Microbe Detection - USU	$150,000	$400,000	$124,314	$199,360	$323,674	$1,432,177
Multi Dimensional Information - U/U	$100,000	$100,000	$416,911	$0	$416,911	$416,911
Petroleum Research -U/U	$100,000	$100,000	$292,000	$374,000	$666,000	$666,000
Profitable uses of agricultural by-products-USU	$100,000	$100,000	$189,922	$65,000	$254,922	$254,922
Smart Sensors -USU	$100,000	$100,000	$167,063	$450,743	$617,806	$617,806
Solid Oxide Fuel Cells -U/U	$170,000	$500,000	$515,000	$0	$515,000	$2,172,397
Subtotals:	**$1,870,000**	**$3,775,000**	**$9,556,676**	**$3,846,722**	**$13,403,398**	**$27,748,679**
CENTERS FUNDED IN FISCAL 2000/2001:						
All Graduated Centers		$24,048,655				$181,148,660
All Distinguished Centers		$5,890,440				$147,118,784
TOTALS:		**$33,714,095**			**$13,403,398**	**$356,016,123**

2000/2001 MATCHING RATIO	**7.2**	**: 1**
CUMULATIVE MATCHING RATIO	**10.6**	**: 1**

CENTERS OF EXCELLENCE - 2000/2001: Summary of Key Commercial Accomplishments

	Spin-Off Companies		Companies	Patents/Copyrights		Licenses
	New	Total	Assisted	Pending	Issued	Signed
CENTERS FUNDED IN FISCAL 2000/2001						
Acoustic Cooling - U/U	0	0	1	0	0	0
Advanced Joining of Materials-BYU	0	0	50	5	0	1
Advanced Structural Composites - BYU	1	1	30	3	1	1
Biomedical Optics - U/U	0	0	9	3	1	2
Bioremediation - WSU	1	1	1	1	1	1
Cell Signaling - U/U	3	5	13	25	3	0
Compliant Mechanisms -BYU	0	0	9	11	2	4
Dairy Technology Commercialization - USU	0	1	9	4	0	0
Electronic Medical Education - U/U	1	1	0	2	4	0
Intelligent Computer Tools - BYU	0	0	9	0	0	2
Rapid Microbe Detection - USU	1	1	6	2	3	1
Multi-Dimensional Information-U/U	0	0	4	1	0	0
Petroleum Research - U/U	0	0	5	0	1	0
Profitable Uses of Agricultural Byproducts-USU	0	0	12	1	0	1
Smart Sensors-USU	0	0	13	4	0	0
Solid Oxide Fuel Cells -U/U	1	1	5	3	2	0
Subtotals:	8	11	175	65	18	13
ALL CENTERS TOTALED						
Graduated and Distinguished Centers Included						
TOTALS:		**142**	**1046**		**105**	**173**

Description of
Centers Selected for Funding
Fiscal Year 2001-2002

Acoustic Cooling Technology (U/U) - has developed novel miniature acoustic cooling devices and technologies for application in electronic circuits, computers, lap-top computers, and other small scale devices.

Advanced Joining of Materials (BYU) - has developed new friction stir welding tools and materials and also developed appropriate control systems and multi-axial capability for all levels of manufacturing.

Advanced Structural Composites (BYU) - develops commercial products for the integration of damping materials with composites and the creation of lightweight composite materials.

Biomedical Optics (U/U) - has developed optical technologies for medical diagnostic and therapeutic (surgical) treatments in medicine, e.g. non-invasive assessment and therapeutic treatments of mucosal tissues.

Bioremediation (WSU) - has a patented technology for the removal of selenium metal; additional multiple metal removal technologies are poised in the commercialization pipeline. One new company has been formed.

Cell Signaling (U/U) - is focused on technologies important to the treatment of cancer, allergy, asthma, and inflammation. Near-term products for commercialization include chemical agents developed in the center. Two new companies have been started.

Compliant Mechanisms (BYU) - accelerates and streamlines commercial applications of devices that obtain their motion from the deflection of flexible parts rather than from pin joints.

Electronic Medical Education (U/U) - develops marketable medical education products by authoring and packaging tools that will be used to create medical education products, and sell them as a component based medical information management and processing system. A new company was formed this year.

Nuclear, Medical and Environmental Technologies (U/U) - develops high specific activity, short-lived radioisotopes; production of irradiated seeds for use in treatment of selected cancers; and evaluation of performance of electronic components and integrated systems upon exposure to neutrons.

Petroleum Research (U/U) - Develops cost-effective solutions of liquid hydrocarbon production, handling and transportation. The focus is on assessing the physical properties and chemical thermodynamics of naturally occurring hydrocarbons; optimization of enhanced petroleum recovery; process control and production automation in oil and gas field; and the development of pipeline transportation strategies.

Profitable Uses of Agricultural Byproducts (USU) - develops cost-effective technologies to treat and dispose of animal waste generated in agriculture. The conversion of the waste products by anaerobic systems results in "biogas" and nutrients to be used in soil amendments.

Rapid Microbe Detection (USU) - has developed an immuno-flow technology to detect contaminating microbes rapidly; to enhance real time decisions in several industries, including food, pharmaceutical and public health.

Rapid Prototyping and Manufacturing (U/U) - has developed the capability of building very large prototypes and techniques for a large number of molded parts from CAD design in a short period of time.

Representation of Multi-Dimensional Information (U/U) - has developed a new visualization technology that facilitates the rapid and accurate analysis of large quantities of complex and continuously changing data. The patent pending technology could be utilized in a number of areas, including medicine, finance, entertainment, process control, corporate management, quality assurance, network monitoring etc.

Smart Sensors (USU) - is engaged in the development and commercialization of sensor-based products. Product applications span a wide array of sensing and communication needs. An application close to market is the detection of faults in aircraft wiring.

Vascular Biotherapeutics (U/U) - is focused on commercializing medical strategies and devices that target blood vessel formation for the treatment of cancer and obstructive vascular diseases such as atherosclerosis.

Part 6
Centers of Excellence

9-2-601. Purpose.

(1) The Legislature recognizes that the growth of new industry and expansion of existing industry requires a strong technology base, new ideas, concepts, innovations, and prototypes. These generally come from strong research colleges and universities. Technical research in Utah's colleges and universities should be enhanced and expanded, particularly in those areas targeted by the state for economic development. Most states are enhancing their research base by direct funding, usually on a matching basis. The purpose of this part is to catalyze and enhance the growth of these technologies by encouraging interdisciplinary research activities in targeted areas. The Legislature recognizes that one source of funding is in matching state funds with federal funds and industrial support to provide the needed new technologies.

(2) The Legislature recommends that the governor consider the allocation of economic development funds for Centers of Excellence to be matched by industry and federal grants on at least a two-for-one basis.

(3) The Legislature recommends that such funds be allocated on a competitive basis to the various colleges and universities in the state. The funds made available should be used to support interdisciplinary research in specialized Centers of Excellence in technologies that are considered to have potential for economic development in this state.

History: C. 1953, 63-62-1, enacted by L. 1985, ch. 103, § 1; 1986, ch. 109, § 1; renumbered by L. 1992, ch. 241, § 60.

9-2-602. Short title - Definitions.

(1) This part is known as the "Centers of Excellence Act."

(2) As used in this part, "Centers of Excellence" means university-based, industry-supported, cooperative research and development programs.

History: C. 1953, 63-62-2, enacted by L. 1985, ch. 103, § 2; 1986, ch. 109, § 2; renumbered by L. 1992, ch. 241, § 61.

9-2-603. Administration - Grants.

(1) This part shall be administered by the Division of Business and Economic Development.

(2) The department may award grants to the various colleges and universities in the state for the purposes of this part.

(3) Recommendations for funding shall be made by the division with the advice of the State Advisory Council for Science and Technology, with the approval of the board. Each proposal shall receive the best available outside review.

(4) In considering each proposal, the division shall weigh technical merit, the level of matching funds from private and federal sources, and the potential for job creation and economic development. Proposals or consortia that combine and coordinate related research at two or more colleges and universities shall be encouraged.

(5) The State Advisory Council on Science and Technology shall review the activities and progress of individual centers on a regular basis and assist the division in preparing an annual report on the accomplishments and direction of the Centers of Excellence Program.

History: C. 1953, 63-62-3, enacted by L. 1986, ch. 109, § 3; renumbered by L. 1992, ch. 241, § 62.

Repeals and Reenactments. - Laws 1986, ch. 109, § 3 repealed former § 63-62-3, as enacted by L. 1953, ch. 103, § 3, relating to creation of a committee for technology excellence in engineering research, and enacted the above section.